OFFICE O			AW MODIF			- -	N	Offi 875	North	Naval Re Randolph , VA 2220	Street	
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AL HESE!			2. AUTHORITY:						NS NUM	BER:		•
4, AWARD NO.:			10 USC 2358, 3 5. MODIFICATION NO.:			304 ICATION	I TYPE:	7. PR N	10.:			1
N00014-13-1-0549 8. ACTIVITY/AGENCY PROPO	NOAL NO.		9. RECIPIENT PROPOSA		New	0 DDOD	OSAL DA			41-00 VITY TYPE:	Lio ppoop	AAA TYOE:
N/A	DSAL NO.:		113-0806; 173	45		07-FE	B-13				12. PROGR onr	AM TYPE:
13. ISSUED TO 13b. CAG 13a. ADDRESS: 1KVP4		. EDI/6	EFT NUMBER:				DDRESS		ERENT	FROM BLOC	K 13):	
UNIVERSITY OF MAS OFFICE OF GRANT A ADMINISTRATION 70 BUTTERFIELD TH AMHERST, MA 01003	SSACHUSET AND CONTI	rts .	AMHERST ,									
13d, BUSINESS OFFICE CON CAROL P. SPRAGU												
13e, TELEPHONE NUMBER: (413) 5450698	13f. EMAIL A	DDRE sgs. un	ESS: nass.edu									
15. RESEARCH TITLE AND/O Rewiring a Microb							S					
16. FUNDING	ACTIVI	TY/AG	ENCY SHARE REC	IPIEN1	Γ SHAF	RE		T	OTAL	17. CURRENT	FUNDING PER	NOD
PREVIOUSLY OBLIGATED:			\$.00		\$.0	00		\$.00		N/A THROUGH	
OBLIGATED BY THIS ACTION	:	\$16	8,317.00		\$.0	00	\$16	8,317	.00		N/A	
TOTAL OBLIGATED ON AWAF	RD:	\$16	8,317.00		\$.0	0.0	\$16	8,317	.00	18. PERIOD C	OF PERFORMAN	ICE
FUTURE FUNDING:	ģ-		1,685.00		\$.(\$1,27		- 1		01-JUN-13 THROUGH	3
GRANT TOTAL:			0,002.00		\$.0		\$1,44	•			31-MAY-17	,
19. ACCOUNTING AND APPR See attached Final 20a. PRINCIPAL INVESTIGATO TECHNICAL REPRESENTATIV DEREK R LOVLEY	ncial Aco	coùn	ting Data Sheet	21. TE 21a. N 21c, A Of 1 875	NAME: NDDRE Eice 5 No:	Linda SS: of Na rth Ra	PRESENTA a A. C aval R andolp VA 222	hrise esear h Str	ch eet		21b. CODE: ONR 34	12
20b, TELEPHONE NUMBER:	20c. EMAIL A	ADDRE	ESS:	21d, T	ELEPI	HONE N	JMBER:		2	21e. EMAIL AI	DDRESS:	
(413) 5459651	dlovley@mid	crobio				696-4				CHRISEISONR		
22. AWARDING OFFICE CONT 22a. NAME: Elizabeth F 22c. ADDRESS:	ord		22b. CODE: ONR BD025	23a. A	OMINI	ISTRATIV	/E OFFICI	E:			23b. CODE: N6287	9
Office of Naval Re 875 North Randolph Arlington, VA 2220	search Street	ADDRE	-58S·	495 BOS PHO	5 SUI STON ONE:	MMER (, MA ((617)	TON N6 STREET 02210-) 753- 753-46	' ROOM 2109 3283	627			
(703) 696-2576	FORDE@ONR.	1, YVAN	AIL									
24, SUBMIT PAYMENT REQUE		25a.	PAYING OFFICE:	25b. C	ODE: HO02	51		26a. PA	TENT O	FFICE:	26b, CODE: NO 0 0 1	4
Same as block #23a			AS COLUMB-NAVY DLUMBUS, OH 4321	ACQ				ATTN: One L 875 N	ONR E iberty orth I	y Center	earch Street, Sui	

AWARD NO.	AWAR	D/MODIFI	CATION	MODIFICATION NO.	
N00014-13-1-0549 27. SPECIAL INSTRUCTIONS:					<u>i</u>
27. SPECIAL INSTRUCTIONS: See "Special Requirements" Att	tachment				
see "special Requirements" Act	caciment				
28. DELEGATIONS: The administration duties listed	l below have bee	en delegated to the a	dministrative office (bl	lock 23a). Upon request the awardin	g office contact (block 2:
will make their full text available. Please direct quest	tions to the conta			/Contracts-Grants/Regiona	
D.11 Delegabien	····			,	
Full Delegation					
29. TERMS AND CONDITIONS: The following term: Upon request the awarding office contact named in	s and conditions	are incorporated here we their full text availa	ein by reference with thie, or they can be fo	the same force and effect as if they tund as described below.	vere given in tull text.
DOCUMENT	DIOCK ZZ WIII III GI	te their rais text availe	1010, 0, 1110) 041, 00 10		
The following documents may be for	und at:				
http://www.onr.navy.mil/Contracts	-Grants/sub	mit-proposal/g	grants-proposa.	1/grants-terms-condition	.s.aspx
UAAC Acceptance C November 2003					
Agency Specific February 2011					•
UAWA Award A November 2003					
Core June 2011					
30. OPTIONS OPTION NO.		AMOUNT		PERIOD	
(1)					
(2)					
(3)					
(4)					
31. REPORTS: The following reports must be submit the project. Final Technical Reports must have a SF	itted to the indica	ated addressees, in ti	he indicated quantities	s, within 90 days following the expira	tion or termination of nodification, complete
the project, Final Technical Reports must have a SF Block 12a of the SF298 as follows: "Approved for Pt	ublic Release; dis	stribution is Unlimited	".	mess officialise stated in the director	nounoun somprono
ADDRESSEE		EPORT TYPE			COPIES
See block #21	F	inal Technic	al Report wi	th SF298	1
bee brook #21	I	nterim Resea	rch Performa	nce Report (As Requir	ed) 1
	w	ith SF298			
				5 1 D 000	
See block #23a		eport of Inv inal Technic		Subcontracts - DD 882	
				nce Report (As Requir	ed) 1
	F	inal Federal	Financial S	tatus Report - SF425	- 1
		ncluding Lin		-	
Defense Technical Information	Conter F	inal Technic	al Report wi	th SF298	i
8725 John J Kingman Road Ste	0944 II	nterim Resea	rch Performan	nce Report (As Requir	ed) 1
Fort Belvoir, VA 22060-6218		ith SF298		-	
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See block #26a	R	eport of Inv	entions and	Subcontracts - DD 882	1
		inal Technic	al Banawt		1
Naval Research Laboratory	P T	nterim Resea	rch Performa	nce Report (As Requir	
ATTN: CODE 5596 4555 Overlook Avenue SW		ith SF298			
Washington, DC 20375-5320					
<u> </u>					
32, FOR THE RECIPIENT				STATES OF AMERICA	
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32b. NAME AND TITLE OF SIGNER	3XC	September 1980 of the	Blizabeth Fo		20-JUN-13
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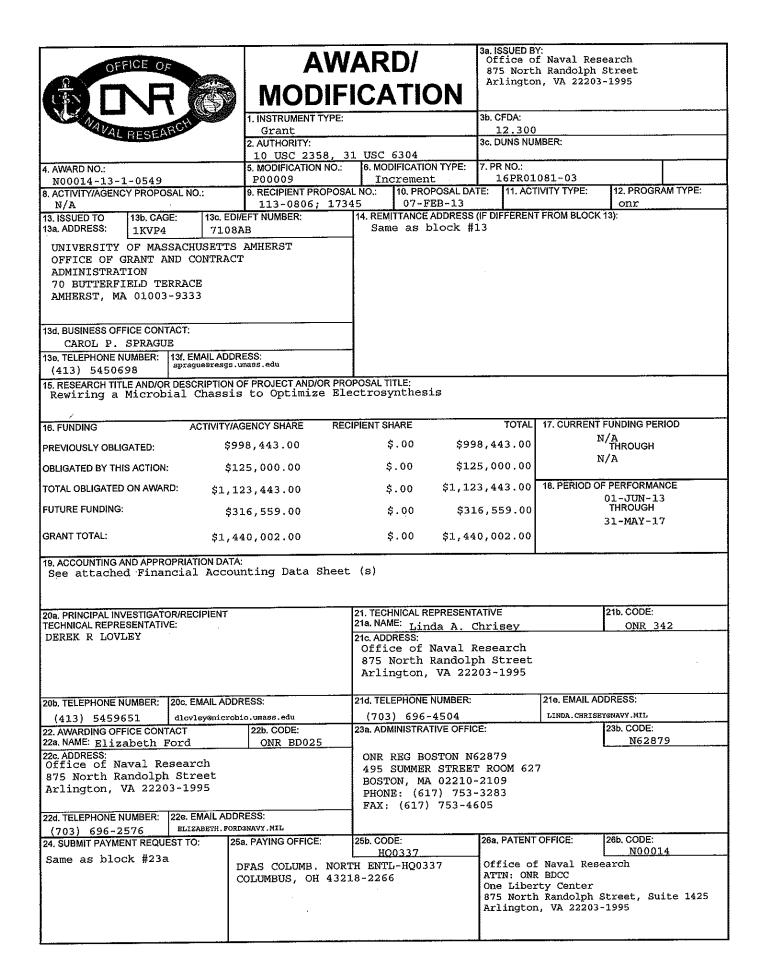
	7.77		\$168,317.00 FRC:41SB	\$168,317.00	\$168,317.00	for COMPTROLLER, ONR CONTRACT REVIEWED	
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	AMOUNT (CRITICAL)		PAGE TO FALL \$00 \$00 \$00	for COMPTROLLER, ONR CONTRACT REVIEWED	
2. SPIIN (CRITICAL) 3. MOD (CRITICAL) 4. PR NUMBER 13 PRO 7241-00	ACCOUNTING CITATION 8.	This page is intentionally blank	PAGE TOTAL	GRAND TOTAL	FOR FISCAL DATA AND SIGNATURE BY DATE:
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AWARD NO.	AWARD/MODI	FICATION	MODIFICATION NO. P00009	
N00014-13-1-0549 27. SPECIAL INSTRUCTIONS:				
See "Special Requirements" At	tachment			
28. DELEGATIONS: The administration duties listed	d below have been delegated to the	e administrative office (plock 23a). Upon request the awarding	office contact (block 22)
will make their full text available. Please direct ques	tions to the contacts @:		l/Contracts-Grants/Regional	
Full Delegation				
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29, TERMS AND CONDITIONS: The following term Upon request the awarding office contact named in	is and conditions are incorporated I	herein by reference with	n the same force and effect as if they w	ere given in full text.
DOCUMENT		anable, or they out be t	odije do dobolisod poloti.	
The following documents may be for http://www.onr.navy.mil/Contracts	und at: -Grants/submit-proposal	l/grants-proposa	al/grants-terms-conditions	a.aspx
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Standard Terms and Conditions for Standard Terms and Conditions for	Research Grants - June	3 2011 (Core) ruary 2011 (Ager	ncv Specific)	
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UAWA Award A			•	
30. OPTIONS OPTION NO.	AMOUNT		PERIOD	
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31. REPORTS: The following reports must be submitted project. Final Technical Reports must have a Si	nitted to the indicated addressees,	in the indicated quantiti	es, within 90 days following the expiration	on or termination of addition complete
Block 12a of the SF298 as follows: "Approved for P	ublic Release; distribution is Unlim	ited".	STREET STREET WAS ALLES AND	Junious () Junious
ADDRESSEE	REPORT TYPE			COPIES
See block #21	Final Techn	ical Report w	ith SF298	1
		earch Perform	ance Report (As Require	ed) 1
	with SF298	•		
See block #23a			Subcontracts - DD 882	1
	Final Techn		ance Report (As Require	ed) 1
	Final Feder	al Financial	Status Report - SF425 -	. 1
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Defense Technical Information	Center Final Techn	ical Report wi	th SF298	1
8725 John J Kingman Road Ste	0944 Interim Res	earch Performa	ince Report (As Require	ed) 1
Fort Belvoir, VA 22060-6218	with SF298			
See block #26a	Report of I	nventions and	Subcontracts - DD 882	1
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4555 Overlook Avenue SW Washington, DC 20375-5320	with SF298			
Mashington, De 20015-5520				
32. FOR THE REGIPIENT	1	1	O STATES OF AMERICA	
32a. SIGNATURE OF PERSON AUTHORIZED TO	SIGN	33a, SIGNATURE OF (b) (6)	AWARDING OFFICER	#
N/A - SIGNATURE NOT REQUIRE	D ON THIS AWARD	1 -/ \-/		
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32b. NAME AND TITLE OF SIGNER	32c DATE SIGNED	3 5	E OF AWARD OFFICER	33c. DATE SIGNED
		Elizabeth Fo	ora	23-FEB-16

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L) 3. MOD (CRITICAL) 4. PR NUMBER		7.	WCC NCC	00000 SE10	PAGE TOTAL	GRAND TOTAL	
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AWARD NO.	SPECIAL REQUIREMENTS	MODIFICATION NO. P00009	
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			10 USC 2358, 31 5. MODIFICATION NO.:	L USC	6304 DIFICATIO	N TYPE:	7. PR NO.:	<u></u>		
4. AWARD NO.: N00014-13-1	-0549		P00008	Inc	cremen	t	16PR0	1081-02		
8. ACTIVITY/AGENC	Y PROPOS	AL NO.:	9. RECIPIENT PROPOSAL			POSAL DAT	E: 11. AC	TIVITY TYPE:	12, PROGR.	AM TYPE:
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13a, ADDRESS:	1KVP4	710		Sam	ie as k	olock #1	.3			
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13d. BUSINESS OFF										
13e. TELEPHONE N		13f EMAIL ADI	ORESS:	1						
(413) 54506:	98	sprague@resgs	.umass.edu		171 C.		·			
15.RESEARCH TITL Rewiring a	E AND/OR Microb	DESCRIPTION Lal Chass:	OF PROJECT AND/OR PRO is to Optimize Ele	ctros	ynthes	is				
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19. ACCOUNTING A See attached	ND APPRO d Finar	PRIATION DA	TA: Dunting Data Sheet							,
20a. PRINCIPAL IN	/ESTIGATO	R/RECIPIENT	<u>.</u>			EPRESENT			21b. CODE: ONR 3	42
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20b. TELEPHONE N	IUMBER:	20c. EMAIL AC	DDRESS:	21d. TE	LEPHONE	NUMBER:	-	21e. EMAIL		
(413) 54596	651.		obio.umass.edu		3) 696		<u> </u>	LINDA.CHRI	SEY@NAVY.MIL 23b. CODE:	<u> </u>
22. AWARDING OFF			22b. CODE: ONR BD025	23a. AD	MINISTRA	ATIVE OFFIC	/E.		N628	79
22c. ADDRESS: Office of Na 875 North Ra Arlington, N	aval Re andolph VA 2220	search Street 3-1995	DDRESS:	495 BOST PHON	SUMME: FON, M. NE: (6)	OSTON NE R STREET A 02210- 17) 753-40	r ROOM 6 -2109 -3283	27		
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AWARD NO.	AWARD/MC	DIFICATION	MODIFICATION NO. P00008			
N00014-13-1-0549	7,110,11,120,111		P00008			
27. SPECIAL INSTRUCTIONS: See "Special Requirements" At	tachment					
See "Special Requirements Ac						
			at 1 00 \ 11	ing office contact (block 22)		
28. DELEGATIONS: The administration duties liste	d below have been delegate	ed to the administrative office (block 23a). Upon request the award	Ing office confact (block 22)		
will make their full text available. Please direct que	h	ttp://www.onr.navy.mi	1/Contracts-Grants/Region	1a1-Concacts.aspx		
Full Delegation						
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29. TERMS AND CONDITIONS: The following terr Upon request the awarding office contact named in	ns and conditions are incorp I block 22 will make their ful	text available, or they can be	found as described below.	,		
DOCUMENT						
The following documents may be for http://www.onr.navy.mil/Contracts	ound at: :-Grants/submit-pro	posal/grants-propos	al/grants-terms-condition	ons.aspx		
Standard Terms and Conditions for Standard Terms and Conditions for	Research Grants -	- June 2011 (Core) - February 2011 (Age	ncy Specific)			
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30. OPTIONS OPTION NO.	AM	OUNT	PERIOD	-		
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31. REPORTS: The following reports must be sub the project. Final Technical Reports must have a Block 12a of the SF298 as follows: "Approved for			Uniess otherwise stated in the awar	Willoutheadon, complete		
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		n - + - f Inventions and Subcontracts - DD 882				
See block #23a	Report	Report of Inventions and Subcontracts - DD 882 Final Technical Report				
	Interi	Interim Research Performance Report (As Required)				
	Final	Federal Financial	Status Report - SF42	5 - 1		
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Fort Belvoir, VA 22060-6218	with S	E 2 9 0				
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Washington, DC 20375-5320						
32 FOR THE RECIPIENT	<u> </u>	33, FOR THE UNIT	ED STATES OF AMERICA			
32 FOR THE REGISERY 328 SIGNATURE OF PERSON AUTHORIZED	O SIGN	33a, SIGNATURE	OF AWARDING OFFICER			
		(b) (6)				
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	32c. DATE S	IGNED 33b, NAME AND T	ITLE OF AWARD OFFICER	33c. DATE SIGNED		
32b. NAME AND TITLE OF SIGNER	- Vio Priico	Ellen Simo		23-DEC-15		

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AWARD NO. NO0014-13-1-0549	SPECIAL REQUIREMENTS	P00008
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CAROL P. 13e. TELEPHONE N	IIIMBER: 11	3f FMAIL ADD	RESS:						
(413) 54506	98	sprague@resgs	umass.edu		-171 P.			···	
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20b. TELEPHONE I	NUMBER:	20c. EMAIL AD	DRESS:		LEPHONE N		···-	21e. EMAIL A	
(413) 5459	651		obio.umass.edu	(70	3) 696-4 MINISTRATI	504	·E-	LINDA.CHRIS	23b, CODE:
22. AWARDING OF 22a. NAME: Eliz			22b. CODE: ONR BD025	23a. AL	MINISTRATI	VE OFFIC	·E.		N62879
22c. ADDRESS: Office of N 875 North R Arlington,	Javal Re Randolph VA 2220	search Street 3-1995 22e. EMAIL AC	DRESS:	495 BOS	REG BOS SUMMER TON, MA NE: (617) : (617)	STREET 02210-	r ROOM 62 -2109 -3283	7	
(703) 696-2 24. SUBMIT PAYM	2576 SENT REQUE		25a, PAYING OFFICE:	25b. CC			26a, PATENT	OFFICE:	26b, CODE: N00014
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AWARD NO.	AWARD/MODIF	ICATION	MODIFICATION NO.	
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27. SPECIAL INSTRUCTIONS: See "Special Requirements'	. Attachment			
See Special Reduitoments	1			
28. DELEGATIONS: The administration dutie	E to the law have been delegated to the	administrative office (block 23a). Upon request the awarding	office contact (block 22)
 DELEGATIONS: The administration dutie will make their full text available. Please direct 	s listed below have been delegated to the	/www.onr.navv.mi	1/Contracts-Grants/Regional	-Contacts.aspx
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Full Delegation				1
29. TERMS AND CONDITIONS: The followin Upon request the awarding office contact nar	ng terms and conditions are incorporated by	rerein by reference wit	h the same force and effect as if they w found as described below.	ere given in full text.
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The following documents may b http://www.onr.navy.mil/Contr	e found at:	/grants-propos	al/grants-terms-conditions	s.aspx
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			Unless otherwise stated in the award/n	nodification, complete
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N/A - SIGNATURE NOT REC	DUIRED ON THIS AWARD			
		AND MAKE THE T	TI E OF AIMARD OFFICER	I 33c. DATE SIGNED
32b. NAME AND TITLE OF SIGNER	326 DATE SIGNED	33b. NAME AND II	TLE OF AWARD OFFICER	22-DEC-15

for COMPTROLLER, ONR CONTRACT REVIEWED

COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE BY DATE:

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ONR AWARD FORM (10/99) - version 1.1

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3a ISSUED BY: Office of Naval Research 875 North Randolph Street

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15. RESEARCH TITL Rewiring a	F AND/OR	DESCR al Cl	IPTION (nassis	FPROJECTAN to Optim	ND/OR PRO ize Ele	POSAL TI ctrosy	TLE: /nthesi	ls	• •				
16. FUNDING		AC	TIVITY/A	GENCY SHARE	REC	IPIENT SH	ARE		7	TOTAL	17. CURRE	NT FUNDING	PERIOD
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20b. TELEPHONE N	UMBER:	20c. EM	AIL ADD	RESS:		21d. TEL	EPHONE	NUMBER:			21e, EMAIL	. ADDRESS:	
(413) 54596	551		y@microb	io.umass.edu) 696-				LINDA.CHR	ISEYGNAVY.MI	
22. AWARDING OF	FICE CONT			22b. CODE: ONR BD	025]23a, ADN	MINISTRA	TIVE OFFIC)E:			23b, COD N6	E: 2879
22a. NAME: Elizabeth Ford ONR BD025 22c. ADDRESS: Office of Naval Research 875 North Randolph Street Arlington, VA 22203-1995 22d. TELEPHONE NUMBER: 22e. EMAIL ADDRESS:					ONR REG BOSTON N62879 495 SUMMER STREET ROOM 627 BOSTON, MA 02210-2109 PHONE: (617) 753-3283 FAX: (617) 753-4605								
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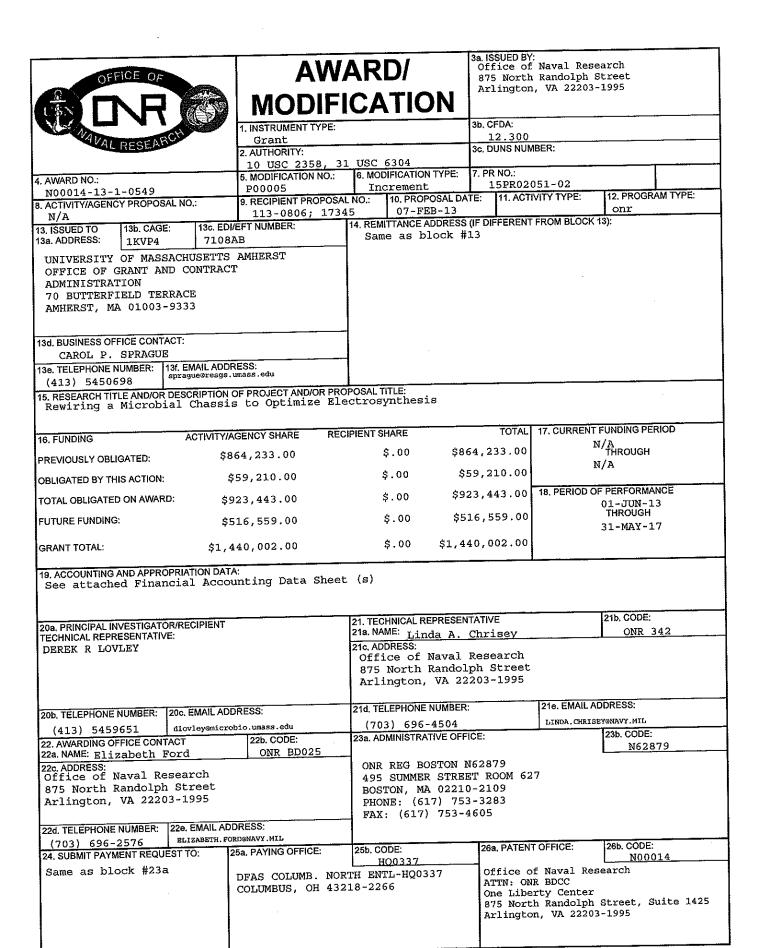
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AWARD NO. NOOO14-13-1-0549	AWARD/MOD	DIFICATION	P00006	
27. SPECIAL INSTRUCTIONS:				
See "Special Requirements"	Attachment			:
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28. DELEGATIONS: The administration duties I will make their full text available. Please direct of	listed below have been delegated to	the administrative office	(block 23a). Upon request the awarding	office contact (block 22)
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Full Delegation				
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29. TERMS AND CONDITIONS: The following Upon request the awarding office contact name	terms and conditions are incorporated in block 22 will make their full tex	ed herein by reference wit available, or they can be	th the same force and effect as if they we found as described below.	ere given in full text.
DOCUMENT				
The following documents may be http://www.onr.navy.mil/Contrac	found at: cts-Grants/submit-propor	sal/grants-propos	al/grants-terms-conditions	aspx:
Standard Terms and Conditions				
Standard Terms and Conditions in Standard Terms and Conditions in	for Research Grants - Fe	ebruary 2011 (Age	ency Specific)	
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31, REPORTS: The following reports must be s the project. Final Technical Reports must have	a SE298 Report Documentation Pa	ade, accompanying mem.	ties, within 90 days following the expirational transfer of the award/minutes of the award/mi	odification, complete
Block 12a of the SF298 as follows: "Approved to	for Public Release; distribution is Or	illinited .		COPIES
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	Including	Line Item 11		
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Washington, DC 20375-5320				
32, FOR THE RECIPIENT		33. FOR THE UNIT	ED STATES OF AMERICA	
32a. SIGNATURE OF PERSON AUTHORIZE			OF AWARDING OFFICER	
N/A - SIGNATURE:NOT REQU	IRED ON THIS AWARD	(b) (6)		
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32b. NAME AND TITLE OF SIGNER	32c DATE SIGNE	Ellen Simon		19-NOV-15
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ONR AWARD FORM (10/99) - version 1.1

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27. SPECIAL INSTRUCTIONS:					
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28. DELEGATIONS: The administration duties listed	t helow have been delegate	d to the administrative office (block 23a). Upon request the awarding	office contact (block 22)	
will make their full text available. Please direct ques	tions to the contacts @:	the //www.onr name mi	l/Contracts-Grants/Regional	-Contacts.aspx	
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29. TERMS AND CONDITIONS: The following term	s and conditions are incorp	orated herein by reference with	n the same force and effect as if they w	ere given in full text.	
Upon request the awarding office contact named in	block 22 will make their full	text available, or they can be	found as described below.		
DOCUMENT The following documents may be for	und at.				
http://www.onr.navy.mil/Contracts	-Grants/submit-pro	posal/grants-proposa	al/grants-terms-conditions	aspx.	
Standard Terms and Conditions for Standard Terms and Conditions for	Research Grants -	June 2011 (Core) February 2011 (Age	ncy Specific)		
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		Ellen Simon	off	23-MAR-15	

Ellen Simonoff

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ONR AWARD FORM (10/99) - version 1.1

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. AWARD NO.: N00014-13-1-0549		P00004	In	crement	- 1	15PR020		12. PROGRAM TYPE
ACTIVITY/AGENCY PROPOSAL	NO.:	9. RECIPIENT PROPOSAL		10, PROP 07-FE	OSAL DATE	: 11. ACTIV	IIY IYPE:	onr
N/A 3. ISSUED TO 13b. CAGE:	13c EDI	113-0806; 1734 EFT NUMBER:	14. REM	ITTANCE A	DDRESS (IF	DIFFERENT F	ROM BLOCK	13):
3. ISSUED TO 13B. CAGE.	7108		San	ne as bl	Lock #13			
UNIVERSITY OF MASSAC OFFICE OF GRANT AND ADMINISTRATION 70 BUTTERFIELD TERRA AMHERST, MA 01003-93	CONTRACT	AMHERST T						
CAROL P. SPRAGUE	-							
3e. TELEPHONE NUMBER: 13f.	EMAIL ADDF	RESS: umass.edu	l					
(413) 5450698	e e e in Tioble	DE BROJECT AND/OR PROJ	POSAL 1	TITLE:				
5. RESEARCH TITLE AND/OR DE Rewiring a Microbia	Chassi	to Optimize Ele	ctros	ynthesi	. s			
				NIA PIE		TOTAL	17 CURRENT	FUNDING PERIOD
6. FUNDING	ACTIVITY/A	GENCY SHARE RECI	PIENTS		2014	1		I/A THROUGH
REVIOUSLY OBLIGATED:	\$6	14,233.00		\$.00		,233.00		i/A
BLIGATED BY THIS ACTION:	\$2	50,000.00		\$.00	\$250	,000.00		
OTAL OBLIGATED ON AWARD:	\$8	364,233.00		\$.00	\$864	,233.00	18, PERIOD O	FPERFORMANCE 01-JUN-13
UTURE FUNDING:	\$E	575,769.00		\$.00	\$579	,769.00		THROUGH
GRANT TOTAL:	,	140,002.00		\$.00 ·	\$1,440	,002.00		31-MAY-17
19. ACCOUNTING AND APPROPE See attached Financi 20a. PRINCIPAL INVESTIGATOR/ TECHNICAL REPRESENTATIVE: DEREK R LOVLEY	ial Acco	A: inting Data Sheet	21. TEC 21a, NA 21c. AD Off 875	ME: Lin DRESS: ice of North	EPRESENTA da A. C Naval R Randolp	nrisey esearch h Street		21b. CODE: ONR 342
			Arl	ington,	VA 222	03-1995		
	FMAIL ADD	DECC.	21d TF	LEPHONE	NUMBER:		21e. EMAIL A	DDRESS:
20b. TELEPHONE NUMBER: 20		JRESS: bio.umass.edu	(70	3) 696-	4504		LINDA.CHRIS	EY@NAVY.MIL
(413) 5459651 d 22, AWARDING OFFICE CONTAC		22b. CODE:	23a. Al	DMINISTRA	TIVE OFFIC	E:		23b. CODE: N62879
22a. NAME: Elizabeth Fo	rd	ONR BD255	٠	יים מיסט מי	STON N6	2879		102075
22c ADDRESS: Office of Naval Rese 875 North Randolph S Arlington, VA 22203	Street -1995	parco.	495 BOS PHO	SUMMER TON, MA ONE: (6)	STREET A 02210- L7) 753-46	' ROOM 627 2109 3283	7	
	e. EMAIL AD					 :	255125	lack CODE:
24. SUBMIT PAYMENT REQUES		25a. PAYING OFFICE:	25b. C			26a, PATENT	OFFICE:	26b, CODE: N00014
Same as block #23a		DFAS COLUMB. NOR COLUMBUS, OH 432	TH EN	HQQ337 TL-HQQ3 66	37	ATTN: ONF One Liber 875 North	tv Center	search Street, Suite 1

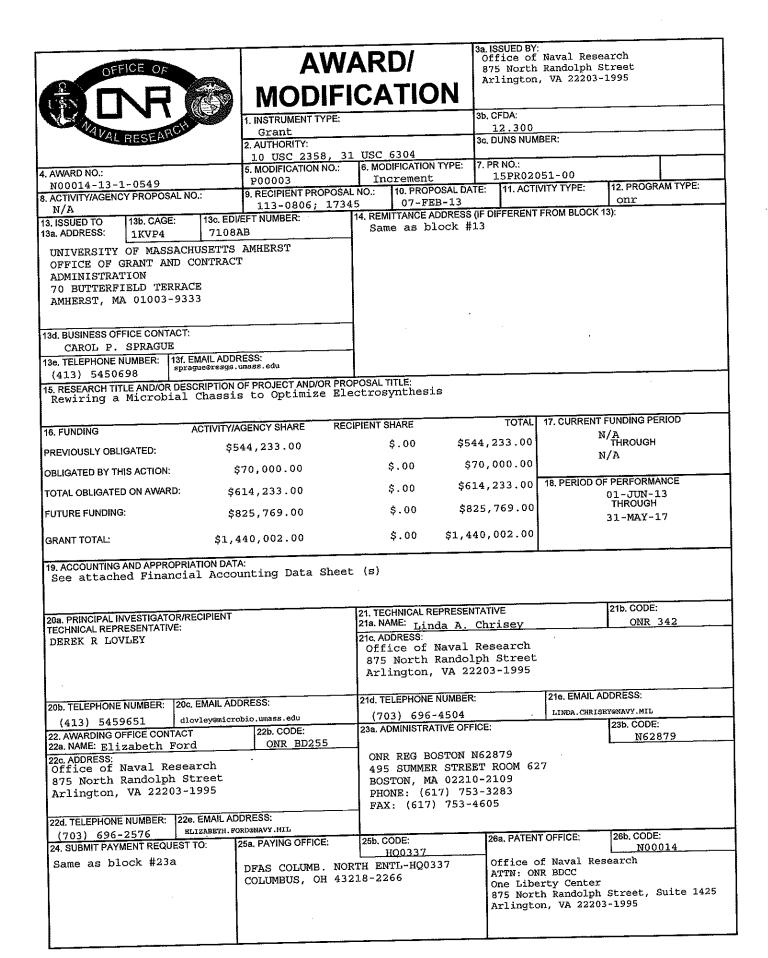
AVA DO NO	ARD/MODIFIC	ATION	MODIFICATION NO.	
AWARD NO. AN NO.0014-13-1-0549	ARDINODIFIC	AHON	P00004	
27. SPECIAL INSTRUCTIONS:				İ
See "Special Requirements" Attachme	ent			
				atting agricult (block 22)
28. DELEGATIONS: The administration duties listed below h will make their full text available. Please direct questions to the	ave been delegated to the address on tacts @:	ministrative office () w.onr.navy.mi	block 23a). Upon request the awarding L/Contracts-Grants/Regional	-Contacts.aspx
Full Delegation			,	
Full Desegacion				
29. TERMS AND CONDITIONS: The following terms and con	nditions are incorporated here	in by reference with	the same force and effect as if they w	ere given in full text.
29. TERMS AND CONDITIONS: The following terms and col Upon request the awarding office contact named in block 22	will make their full text availab	ole, or they can be i	ound as described below.	
DOCUMENT				
The following documents may be found at http://www.onr.navy.mil/Contracts-Grant	s/submit-proposal/g	rants-proposa	al/grants-terms-conditions	,.aspx
Standard Terms and Conditions for Resea	rch Grants - June 2	011 (Core)	our Chadifia	
Standard Terms and Conditions for Resea	rch Grants - Februa	ry 2011 (Agei	acy specific/	
UACC Acceptance C UAWA Award A				
	THAIR T		PERIOD	
30. OPTIONS OPTION NO.	AMOUNT		1 LINOP	
(1) (2)				
(3)				
(4)	the indicated addressees, in th	e indicated quantit	ies, within 90 days following the expirat	ion or termination of
			Unless otherwise stated in the award/n	iodification, complete
Block 12a of the SF298 as follows: "Approved for Public Re-	REPORT TYPE	•		COPIES
ADDRESSEE	Final Technic	al Report W	ith SF298	1
See block #21	Interim Resea	rch Perform	ance Report (As Requir	ed) 1
	with SF298			
See block #23a	Report of Inv	entions and	Subcontracts - DD 882	1
See block #23a	Final Technic	al Report	ance Report (As Requir	ed) 1
	Final Federal	Financial	Status Report - SF425	- 1
	Including Lin	ie Item 11		
Defense Technical Information Cent	er Final Technic	al Report w	ith SF298	ed) 1
8725 John J Kingman Road Ste 0944	Interim Resea	ron Perioru	ance Report (As Requir	
Fort Belvoir, VA 22060-6218	"2011 2222			
		entions and	l Subcontracts - DD 882	1
See block #26a	Report of Inv	encions and	Subcontracts 22 va-	
	Final Technic	al Report		1
Naval Research Laboratory ATTN: CODE 5596	Interim Resea	arch Perform	mance Report (As Requir	red) 1
4555 Overlook Avenue SW	with SF298			
Washington, DC 20375-5320				
32 FOR THE RECIPIENT	3	3. FOR THE UNIT	ED STATES OF AMERICA	
32a. SIGNATURE OF PERSON AUTHORIZED TO SIGN		33a. SIGNATURE ((b) (6)	OF AWARDING OFFICER	
N/A - SIGNATURE NOT REQUIRED ON	ITHIS AWARD	(0) (0)		
		at Alaber Skin wi	TLE OF AWARD OFFICER	33c, DATE SIGNED
32b. NAME AND TITLE OF SIGNER	32c DATE SIGNED	336. NAME AND H Ellen Simon		23-FEB-15

ONR AWARD FORM (10/99) - version 1.1

	NAVY INTERNAL USE ONLY REF DOCACRN	PR#15PR02051-01 FRC:41SB			for COMPTROLLER, ONR CONTRACT REVIEWED	
	AMOUNT (CRITICAL)	\$250,000.00	\$250,000.00	\$250,000.00	for COMPTRO	
FINANCIAL ACCOUNTING DATA SHEET - NAVY 1) 3. MOD (CRITICAL) 4. PR NUMBER 1. 1. 1.5.PR 0.2 051 - 0.1	F. G. H. AAA IT PAA COSTCODE RFM SA (CRITICAL) PAO PROJ INNIT MCC & SUIF	000	PAGE TOTAL	GRAND TOTAL	COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE BY	DATE
FINAN(C. SUBHEAD OBJ PARM (CRITICAL) CLA	WIAE 410 RA				
1. CONTRACT NUMBER (CRITICAL) NOOO14-13-1-0549	CLINISLIN A. B. APPROPRIATION ACRN APPROPRIATION (CRITICAL) (CRITICAL)	AC 1751319			PREPARED/AUTORIZED BY:	DATE:

	8. AMOUNT NAVY INTERNAL USE ONLY (CRITICAL) REF DOC/ACRN		GRAND TOTAL \$.00	OVAL: TA AND SIGNATURE
3 MOD (CRITICAL) 4. PR NUMBER P00004 15PR02051-01	ACCOUNTING CITATION	s page is intentionally blank		COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE
TITCAL) 2. SPIIN (CRITICAL)		rhis		
1. CONTRACT NUMBER (CRITICAL) NO 0014-13-1-0549	6. ACRN 7. (CRITICAL)			PREPARED/AUTHORIZED BY:
1. CONT	5. CLIMSLIN			PREPAR

AWARD NO.	SPECIAL REQUIREMENTS	MODIFICATION NO.
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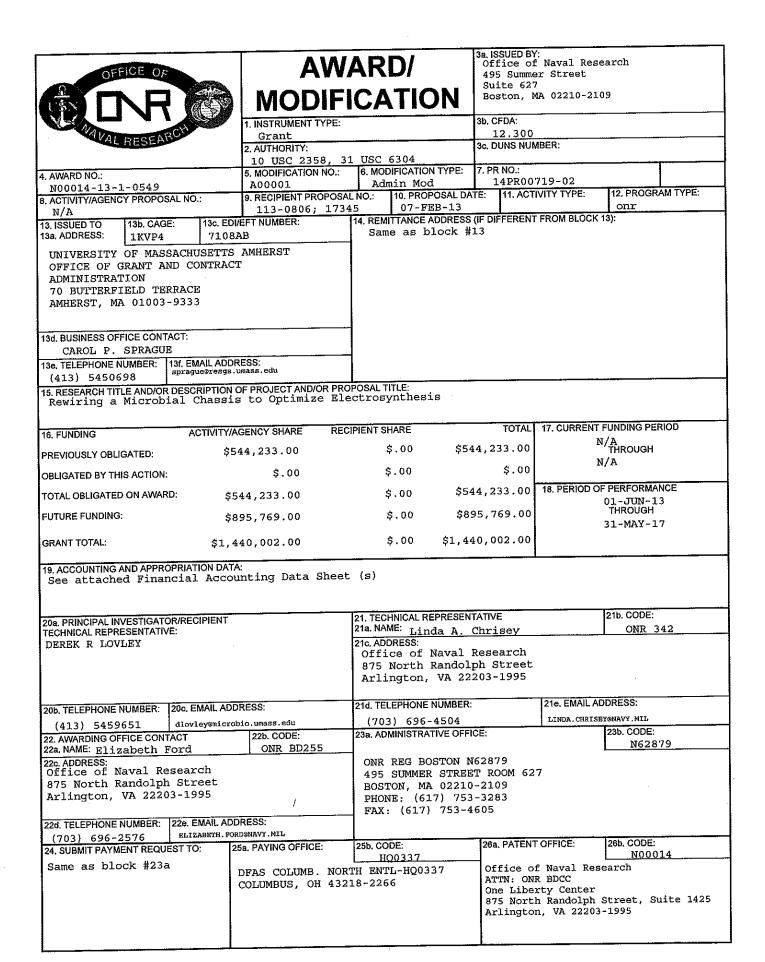
AWARD NO.	AWARD/MODIFI	CATION	MODIFICATION NO.	
N00014-13-1-0549			P00003	
27. SPECIAL INSTRUCTIONS:	hment			i
See "Special Requirements" Attac	SIMOITO			
			the book the arrangement the awarding of	ice contact (block 22)
28. DELEGATIONS: The administration duties listed be will make their full text available. Please direct questions	low have been delegated to the a s to the contacts @: http://w	dministrative office (I ww.onr.navy.mi	block 23a). Upon request the awarding on 1/Contracts-Grants/Regional-C	ontacts.aspx
Full Delegation				
Fuil Delegacion				
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			the come force and effect as if they were	e given in full text.
29, TERMS AND CONDITIONS: The following terms ar Upon reguest the awarding office contact named in bloo	nd conditions are incorporated her ck 22 will make their full text avail	rein by reference will able, or they can be t	found as described below.	9,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
DOCUMENT				
The following documents may be found http://www.onr.navy.mil/Contracts-Gr	l at: cants/submit-proposal/	grants-propos	al/grants-terms-conditions.	aspx
Standard Terms and Conditions for Re Standard Terms and Conditions for Re	esearch Grants - June esearch Grants - Febru	ary 2011 (Age:	ncy Specific)	
UACC Acceptance C				
UAWA Award A				İ
	AMOUNT		PERIOD	
30, OPTIONS OPTION NO.	AWOON			
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(4)	in a to P. I. de adaptace in	the indicated quantit	ies within 90 days following the expiration	n or termination of
			Unless otherwise stated in the award/mo-	dification, complete
Block 12a of the SF298 as follows: "Approved for Fubil	IC Velcase, distribution to attitude	ed"		COPIES
ADDRESSEE	REPORT TYPE		7.1. grace	1
See block #21	Final Techni	cal Report W arch Perform	ance Report (As Required	
	with SF298	42 011	· · · · · ·	
			Cubcontracts - DD 882	1
See block #23a	Final Techni	cal Report	Subcontracts - DD 882	1
	Interim Rese	arch Perform	mance Report (As Require	d) 1
			Status Report - SF425 -	1
	Including Li			1
Defense Technical Information C	Center Final Techni	cal Report w	ath SF298 Mance Report (As Require	§ .
8725 John J Kingman Road Ste 09 Fort Belvoir, VA 22060-6218	with SF298	arch refrorm	111-11-11-11-11-11-11-11-11-11-11-11-11	
FOIC BEIVOIL, VA 22000 0210				
			Subcontracts - DD 882	1
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				· ·
	mi 1 m1 1	anl Perort	<u> </u>	1
Naval Research Laboratory	Final Techni Interim Rese	earch Perfor	mance Report (As Require	
ATTN: CODE 5596 4555 Overlook Avenue SW	with SF298			
Washington, DC 20375-5320				
		33 FOR THE LINIT	ED STATES OF AMERICA	
32. FOR THE RECIPIENT 324. SIGNATURE OF PERSON AUTHORIZED TO S	IIGN	33a. SIGNATURE	OF AWARDING OFFICER	
		(b) (6)		
N/A - SIGNATURE NOT REQUIRED	JUN I HIS AWARD	-		
	32c DATE SIGNED	226 NAME AND T	TLE OF AWARD OFFICER	33c, DATE SIGNED
32b. NAME AND TITLE OF SIGNER	SVC DATE OUT I	SOD INVINE VIAO II	122 41 111111	28-OCT-14

	NAVY INTERNAL	USE ONLY REF DOC/ACRN	PR#15PR02051-00 FRC:41SB		10, 000 - 000 00
		AMOUNT (CRITICAL)	\$70,000.00	\$70,000.00	for COMPTROLLER
FINANCIAL ACCOUNTING DATA SHEET - NAVY 13. MOD (CRITICAL) 14. PR NUMBER 1 SPR02051-00	7	K COST CODE PROJ PDU INIT MCC & SUF	000	PAGE TOTAL	GRAND TOTAL
VTING DATA		IT PAA	2D 000000		L: AND SIGNATURE
IAL ACCOUI		F. G. H. RFM SA AAA (CRITICAL)	349 0 068342		COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE BY DATE:
FINANC 2. SPIIN (CRUTICAL)		D, E. OBJ PARM CLA	410 RB		
	UNTING	B. C. APPROPRIATION SUBHEAD (CRITICAL) (CRITICAL)	1751319 WIAE		
1. CONTRACT NUMBER (CRITICAL)	6. LINE OF ACCOUNTING	CLIN/SLIN A. ACRN (CRITICAL)	y y C		PREPARED/AUTORIZED BY:

ONR AWARD FORM (10/99) - version 1.1

1. CONTRACT NUMBER (CRITICAL)	2. SPIIN (CRITICAL)	3. MOD (CRITICAL)	4. PR NUMBER			
0		P00003	15PR02051-00			NAVY INTERNA!
5. CLINSLIN (S. ACRN 7. (CHINSLIN (CRITICAL)		ACCOUNTING CITATION		S. AMOUNT (CRITICAL)		USE ONLY REF DOC/ACRN
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			PAGE TOTAL	w	00.	
			GRAND TOTAL	\$	\$.00	
PREPARED/AUTHORIZED BY: .	The second secon	A CONTRACTOR OF THE PROPERTY O	COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE RY	for COMPTROL	for COMPTROLLER, ONR CONTRACT REVIEWED	OT REVIEWED
DATE			DATE			

AWARD NO.	SPECIAL REQUIREMENTS	MODIFICATION NO.	
N00014-13-1-0549		P00003	<u> </u>
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WARD NO.	ΔWΔF	RD/MODIFICATION	MODIFICATION NO.	
N00014-13-1-0549	AWAI	(B)((I)(S)	A00001	
7. SPECIAL INSTRUCTIONS:	N Attachment			
See "Special Requirement	is" Accaerment			
				uling office contact (block 22)
8. DELEGATIONS: The administration of	luties listed below have be	een delegated to the administrative of	fice (block 23a). Upon request the awar	and Contacte acry
8. DELEGATIONS. The administration of ill make their full text available. Please of	lifect questions to the con	http://www.onr.nav	mil/Contracts-Grants/Regio	
full Delegation				
		to different his referent	a with the same force and effect as if th	ev were given in full text.
 TERMS AND CONDITIONS: The following request the awarding office contact 	owing terms and condition coamed in block 22 will m	is are incorporated neteril by telerent ake their full text available, or they ca	e with the same force and effect as if the new found as described below.	
OCUMENT				
he following documents may	/ be found at: htracts-Grants/su	bmit-proposal/grants-pro	posal/grants-terms-condit	ions.aspx
Standard Terms and Condition	ons for Research	Grants - June 2011 (Core Grants - February 2011	Agency Specific)	
standard Terms and Condition NAAC UACC Acceptance C Nove	ember	0141100		
IAWA UAWA Award A				
			•	
			PEDIOD	
0, OPTIONS OPTION NO.		AMOUNT	PERIOD	
1)				
2) 3)				
3)				
1 REPORTS: The following reports mu	ust be submitted to the inc	licated addressees, in the indicated o	uantities, within 90 days following the e hem. Unless otherwise stated in the aw	xpiration or termination of ard/modification, complete
he project. Final Technical Reports mus Block 12a of the SF298 as follows: "App			hem. Unless otherwise stated in the aw	
ADDRESSEE		REPORT TYPE		COPIES
		Final Technical Repor	t with SF298	1
See block #21	!	Interim Research Peri	ormance Report (As Req	uired) 1
		with SF298		
		Report of Inventions	and Subcontracts - DD	882 1
See block #23a		Final Technical Repor	rt	11
		Interim Research Per	formance Report (As Req ial Status Report - SF4	uired) 1 25 - 1
		Including Line Item	11	
				1
Defense Technical Infor	mation Center	Final Technical Report	formance Report (As Req	uired) 1
8725 John J Kingman Ros Fort Belvoir, VA 22060-	6218	with SF298		
FOIC BELVOIL, VII 22000		1		
		- L - E Townshippe	and Subcontracts - DD	882 1
See block #26a		Report of inventions	and bascomesure	
				1
Naval Research Laborate	ory	Final Technical Repo	rt formance Report (As Rec	
ATTN: CODE 5596 4555 Overlook Avenue S	ra	with SF298		
Washington, DC 20375-5	320		•	
American and an arrest of			LIMITED STATES OF AMEDICA	
32 FOR THE RECIPIENT		33, FOR THE	UNITED STATES OF AMERICA URE OF AWARDING OFFICER	
32a, SIGNATURE OF PERSON AUTH		(b) (6)	OVE OF THE PERSON ALL PARTY.	·
N/A - SIGNATURE NOT	REQUIRED ON TH			
		18.91	A	33c, DATE SIGNE
32h NAME AND TITLE OF SIGNER		32c. DATE SIGNED 33b. NAME A	ND TITLE OF AWARD OFFICER	22-APR-14

	NAVY INTERNAL USE ONLY REF DOCACRN				for COMPTROLLER, ONR CONTRACT REVIEWED	
	AMOUNT (CRTICAL)		\$.00	\$.00	for COMPTROLLEF	
FINANCIAL ACCOUNTING DATA SHEET - NAVY 1) 3. MOD (CRITICAL) 4. PR NUMBER 1.4. PR NUMBER 1.4. PR NOT 19-02	F. G. H. I. J. K. COST CODE RFM SA AAA IT PAA PROJ PDU (CRITICAL) MCC & SUF	This page is intentionally blank	PAGE TOTAL	GRAND TOTAL	COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE BY DATE:	UAI Er
2. SPIIN (CRITICA	CLINISLIN A. B. C. D. E. APPROPRIATION SUBHEAD OBJ PARM (CRITICAL) (CRITICAL)				PREPAREDIAUTORIZED BY:	DATE

ONR AWARD FORM (10/99) - version 1.1

2. SPIIN (CRITICAL) 3. MOD (CRITICAL) 4. PR NUMBER 1.4 PR 00719-02	ACC	This page is intentionally blank	PAGE TOTAL \$.00	GRAND TOTAL	COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGN	UMIE:
1. CONTRACT NUMBER (CRITICAL)	6. ACRN 7. (CRITICAL)				PREPARED/AUTHORIZED BY:	
1. CON	S. CLINSLIN			·	PREPAR	DATE

	ODECIAL DECLUDEMENTS	MODIFICATION NO.	
	SPECIAL REQUIREMENTO	A00001	
A. The payment office is hereby changed: From: DFAS COLUMBUS NAVY ACQ 3990 E. BROAD STREET BLDG. 21 COLUMBUS, OH 43213 CODE HQ0251 To: DFAS-COLUMBUS CENTER NORTH ENTITLEMENT OPERATIONS P.O. BOX 182266 COLUMBUS, OH 43218-2266 CODE HQ0337 B. The following payment instructions are he NUMBERING OF VOUCHERS SUBMITTED Vouchers submitted to this payment office in - Voucher numbers must begin with BVN.		A00001	

OFFICE OF	AWA		0 8	75 North	Naval Rese Randolph S , VA 22203-	treet
BOR	MODIFIC 1. INSTRUMENT TYPE:	CATIC	N	, CFDA:	<u> </u>	
VAVAL RESEARCH	Grant 2.AUTHORITY: 10 USC 2358, 31	USC 6304		12.300 DUNS NUM PR NO.:	BER:	
NOO14-13-1-0549	P00002	6. MODIFICATION	: [14PR007	719-01 VITY TYPE:	12. PROGRAM TYPE:
N. ACTIVITY/AGENCY PROPOSAL NO.:	9. RECIPIENT PROPOSAL N 113-0806; 17345	1 07 EV	POSAL DATE: 3B-13	1		onr
13. ISSUED TO 13b. CAGE: 13c. EDI/E 13a, ADDRESS: 1KVP4 7108A	EFT NUMBER: 14	4. REMITTANCE A Same as b	DDRESS (IF 1 lock #13	Differen	FROM BLOOK	1 3) .
UNIVERSITY OF MASSACHUSETTS OFFICE OF GRANT AND CONTRACT ADMINISTRATION 70 BUTTERFIELD TERRACE AMHERST, MA 01003-9333	AMHERST					
13d. BUSINESS OFFICE CONTACT: CAROL P. SPRAGUE						
13e, TELEPHONE NUMBER: 13f, EMAIL ADDR sprague@resgs.u	mass.edu					
15. RESEARCH TITLE AND/OR DESCRIPTION C Rewiring a Microbial Chassis	F PROJECT AND/OR PROPOSE to Optimize Elec	OSAL TITLE: trosynthes:	is			
		PIENT SHARE		TOTAL	17. CURRENT	FUNDING PERIOD
10. PORDATO		\$.00	\$292	,446.24		I/A THROUGH
PREVIOUSLY OBLIGATED.	92,446.24	\$.00	•	,786.76	Ŋ	N/A
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101712 022.0	44,233.00	\$.00		ļ		01-JUN-13 THROUGH
FUTURE FUNDING: \$8	95,769.00	\$.00	នុសអ១	,769.00		31-MAY-17
GRANT TOTAL: \$1,4	40,002.00	\$.00	\$1,440	,002.00		
19. ACCOUNTING AND APPROPRIATION DATA See attached Financial Accou	incling back blood	21. TECHNICAL R				21b. CODE:
20a. PRINCIPAL INVESTIGATORRECIPIENT TECHNICAL REPRESENTATIVE: DEREK R LOVLEY		21a.NAME: <u>Lir</u> 21c.ADDRESS: Office of 875 North Arlington,	nda A. Ch Naval Re Randolph , VA 2220	nrisey esearch n Street		ONR 342
20b. TELEPHONE NUMBER: 20c. EMAIL ADD	J. 1. 1	21d, TELEPHONE			21e. EMAIL A	BY@NAVY.MIL
(413) 5459651 dlovley@micro	bio.umass.edu 22b. CODE:	(703) 696 23a, ADMINISTRA	-4504 ATIVE OFFICE	Ē:		23b. CODE:
22. AWARDING OFFICE CONTACT 22a. NAME: Elizabeth Ford	ONR BD255		OGRON NG	2070		N62879
22c. ADDRESS: Office of Naval Research 875 North Randolph Street Arlington, VA 22203-1995	DRESS:	ONR REG B 495 SUMME BOSTON, M PHONE: (6 FAX: (617	R STREET A 02210- 17) 753-	ROOM 62 2109 3283	17	
(703) 696-2576 ELIZABETH, FO	RD@NAVY .MIL	25b, CODE:		26a, PATEN	T OFFICE:	26b. CODE:
24. SUBMIT PAYMENT REQUEST TO: 2 Same as block #23a.	DFAS CLEVELAND NA	HO0251 AVY-HQ0251		One Libe	erty Center	Street, Suite 1425

				MODIFICATION NO.	
AWARD NO.	AWAR	D/MODIFI	CATION	P00002	
N00014-13-1-0549	,			100002	
27. SPECIAL INSTRUCTIONS:	l +				
See "Special Requirements" Att	aciment			•	
28. DELEGATIONS: The administration duties listed	below have bee	n delegated to the a	dministrative office (block 23a). Upon request the awarding o	ffice contact (block 22)
will make their full text available. Please direct quest	ions to the conta	icts @: http://w	ww.onr.navv.mi	l/Contracts-Grants/Regional-	Contacts.aspx
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				the state of the s	ro given in full text
29. TERMS AND CONDITIONS: The following term Upon request the awarding office contact named in	s and conditions	are incorporated he	rein by reference Wit	n the same force and effect as it usey we found as described below.	te diveit in idii toxi:
Upon request the awarding office contact named in	DIOCK 22 Will Har	Ke triell full text avail	aproj or arey ears se		
DOCUMENT The following documents may be for	ınd at:			-1/te borne conditions	2504
The following documents may be for http://www.onr.navy.mil/Contracts	-Grants/sub	mit-proposal/	grants-propos	al/grants-terms-conditions	aspa
Standard Terms and Conditions for	Research G	rants - June	2011 (Core)		ı
Standard Terms and Conditions for Standard Terms and Conditions for	Research G	rants - Febru	ary 2011 (Age	ncy Specific)	
UAAC UACC Acceptance C November					
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(4) 31. REPORTS: The following reports must be subm	nitted to the indic	ated addressees, in	the indicated quanti	ties, within 90 days following the expiration of the sward/more stated in the award/more stated	odification, complete
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	I F	REPORT TYPE			COPIES
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		interim Rese with SF298	arch refror	marice repute (1 1	
	•	MICH DIESO			
		Report of In	ventions and	Subcontracts - DD 882	1
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3a. ISSUED BY: Office of Naval Research

		CATION	Arlington,	875 North Randolph Street Arlington, VA 22203-1995		
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Bd. BUSINESS OFFICE CONTACT: CAROL P. SPRAGUE		4				
Be, TELEPHONE NUMBER: 13f, EMAIL ADI	DRESS: .umass.edu			<u></u>		
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20a. PRINCIPAL INVESTIGATOR/RECIPIENT TECHNICAL REPRESENTATIVE: DEREK R LOVLEY		21a. NAME: Linda A 21c. ADDRESS: Office of Nava. 875 North Rand. Arlington, VA	. Chrisey l Research olph Street		ONR 342	
TECHNICAL REPRESENTATIVE: DEREK R LOVLEY		21a. NAME: Linda A 21c. ADDRESS: Office of Nava. 875 North Rand. Arlington, VA	. Chrisey 1 Research olph Street 22203-1995 ER:	21e. EMAIL	ONR 342 ADDRESS:	
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20b. TELEPHONE NUMBER: 20c. EMAIL A (413) 5459651 dlovley@mic 22. AWARDING OFFICE CONTACT 22a. NAME: Elizabeth Ford 22c. ADDRESS: Office of Naval Research 875 North Randolph Street Arlington, VA 22203-1995	DDRESS: crobio.umass.edu 22b, CODE: ONR BD025	21a. NAME: Linda A 21c. ADDRESS: Office of Nava: 875 North Rando Arlington, VA 21d. TELEPHONE NUMBI (703) 696-4504	. Chrisey 1 Research olph Street 22203-1995 ER: 1 N62879 REET ROOM 62 210-2109 753-3283	LINDA.CHRI	ONR 342 ADDRESS: SEYGNAVY.MIL 23b. CODE:	
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		desinistrativo office (block 23a). Upon request the awarding	office contact (block 22)
28. DELEGATIONS: The administration duties list will make their full text available. Please direct qu	ted below have been delegated to the estions to the contacts @:	e autilitistrative office (l/Contracts-Grants/Regional	-Contacts aspx
	http:/	/www.onr.navy.ml	I/Contracts-Grants/Regional	concacco.aspx
Full Delegation				
			the same force and effect as if they u	vere given in full text
29. TERMS AND CONDITIONS: The following te Upon request the awarding office contact named	ms and conditions are incorporated in block 22 will make their full text at	nerein by reference will /ailable, or they can be t	found as described below.	TO GIVOIT III IAIR TOXAL
DOCUMENT				
The following documents may be f http://www.onr.navy.mil/Contract	found at:	1/grants-proposa	al/grants-terms-condition	s.aspx
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(4) 31. REPORTS: The following reports must be su the project. Final Technical Reports must have a	bmitted to the indicated addressees,	in the indicated quantities accompanying them.	ies, within 90 days following the expira- Unless otherwise stated in the award/n	nodification, complete
the project. Final Technical Reports must have a Block 12a of the SF298 as follows: "Approved for	r Public Release; distribution is Unlin	nited".		
ADDRESSEE	REPORT TYPE			COPIES
	Final Techr	nical Report w	ith SF298	1
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